

# ***CX-5100AH***

HDMI with Audio Amplifier

**Operation Manual**



**CX-5100AH**

## **Revision History**

<b>Revision</b>	<b>Date</b>	<b>Summary of Change</b>
<b>V1</b>	<b>20080926</b>	<b>Preliminary Release</b>

## **Precaution**

Failure to follow the precautions described below may cause damage to Digital HDMI AV Receiver and void the warranty.

- DO NOT open the case. Doing so will void the warranty. If you find problem with it, please return back to your retailer or seller who will assist you or provide you with solution.
- DO NOT use third-Party AC adapter or power cord. Doing so may damage Digital HDMI AV Receiver.
- DO NOT bump, jar or drop contents of the products as it may damage it and result in warranty void.
- DO NOT set any liquids or beverages on the case as they may damage Digital HDMI AV Receiver.

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## **1. Introduction**

Thank you for purchasing Digital HDMI AV Receiver with Audio Amplifier. When HDMI products fill out the market speedily, many follow devices are still yet catching up. How to enjoy a full HDMI solution with limited cost and space is the most urgent request now in the market. How to display a total solution HDMI AV on your HDMI TV that is with limited HDMI sound solution is the key to enjoy your true HDMI AV.

Digital HDMI AV Receiver is the most advanced solution for HDMI Audio Amplifier. Digital HDMI AV Receiver supports not only 3 (three) HDMI input and 2 (two) HDMI output but also, Analog / Digital audio input/output. Digital HDMI AV Receiver allows you to enjoy theater standard sounds with less cost and space. Digital HDMI AV Receiver designs friendly use remote control with entry level set up for your enjoyment of free space entertainment environment. Digital HDMI AV Receiver makes your HDMI AV world ever the best.

Please follow this manual to begin enjoying the benefit of your true HDMI AV. We suggest keeping it in a safe place for future reference.

## **2. Application**

- Home theater entertainment.
- Bridge between your audio devices and video devices.
- Enlarge sounds from stereo in TV to surround 5.1CH HDMI AV.
- Transforms analog sounds into digital sounds.
- Combination usage of Digital (Optical / Coaxial) & HDMI input Digital (Optical / Coaxial) & HDMI output ports.

## **3. Contents**

- Digital HDMI AV Receiver
- Power Adaptor
- Power Cord
- Remote Control RC36 (battery included)
- User Manual

#### **4. System Requirements**

Front LR/Rear LR/Center/Subwoofer speakers, Amplifier, Optical / Coaxial cables, DVD player, HDMI/LCD TV and other audio equipment(s).

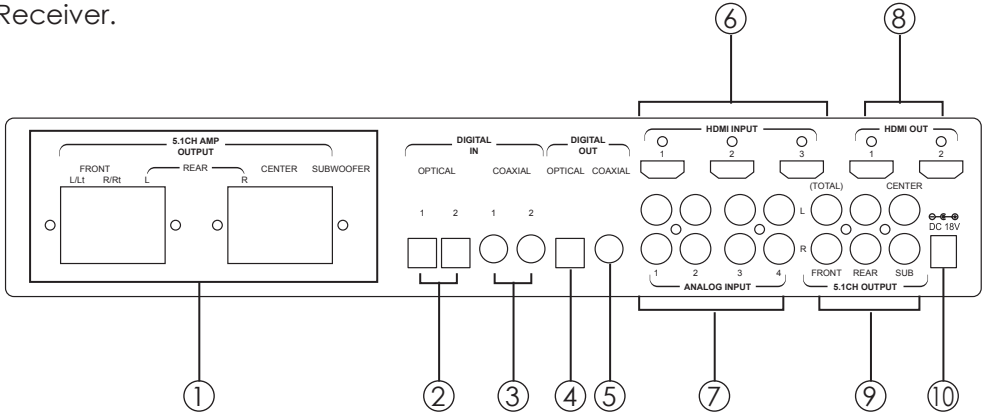
#### **5. Features**

- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 specifications.
- Full HD 1080p supported.
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA and 480p to 1080p. Maximum resolution bandwidth is 165MHz.
- Built-in HDMI EDID simulator and HDCP keyset allows each output to work independently in connecting to a HDMI display.
- 7 Digital (Optical / Coaxial) input port and 4 Digital (Optical / Coaxial) output port.
- Lip Sync delay (up to 480ms can be split up to 3 channels).
- 8Ω speaker will produce sounds up to 9Wx 6 / 54W.
- Easy to install and simple to operate.
- Elegant design with thermal dispensation.

## 6. Installation

Follow the step-by-step instruction below to install your Digital HDMI AV Receiver

Get familiar with the housing and connections of your new Digital HDMI AV Receiver.

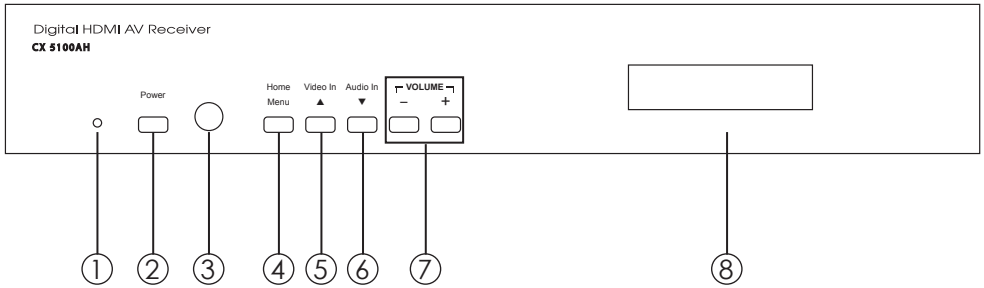


- ① 5.1CH AMP out: Connect the Front LR /Rear LR /Center/Subwoofer to the Amplifier.
- ② Optical 1~2 in: Connect the Optical input ports 1~2 to the Optical output port of your source equipments.
- ③ Coaxial 1~2 in: Connect the Coaxial input ports 1~2 to the Coaxial output port of your source equipments.
- ④ Optical out: Connect the Optical output port to the input port of your audio equipment.
- ⑤ Coaxial out: Connect the Coaxial output port to the input port of your audio equipment.
- ⑥ HDMI 1~3 in: Connect the HDMI 1 ~ 3 input ports to the HDMI output port of your source equipments.
- ⑦ Analog audio in: There are four L/R input connectors; it can connect to four different stereo audio sources.
- ⑧ HDMI out: Connect the HDMI 1 ~ 2 output ports to the HDMI input port of your display or Amplifier.
- ⑨ 5.1 CH out: Connect the Front LR/Rear LR/Center/Subwoofer to Multi CH input.
- ⑩ Power: Plug the 18VDC power supply into the unit and connect the adaptor to AC wall outlet.

Note:

- a. A bitstream format sounds including AC-3 & DTS and others will not be displayable hence, optical, coaxial & 6 RCA will output no sounds and the LCM will show NONPCM. Digital HDMI AV Receiver is not supporting bit steam sounds.
- b. Coaxial / Optical / HDMI Audio Sample Rate: 48KHZ

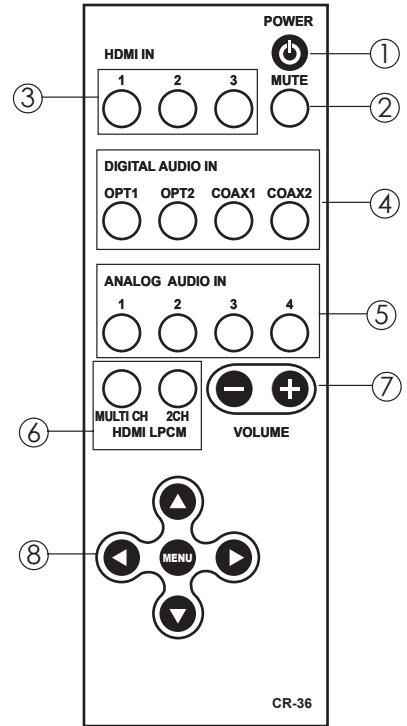
## 7. Front View



- ① Power indicator: When power on, the LED will indicate in Green color. When power off, the LED will indicate in Red color.
- ② Power switch: Turn the system ON/OFF.
- ③ IR sensor.
- ④ Home menu: Press the button to enter the LCM menu selection. For the LCM menu selections please refer to “section 9 LCM Operation”.
- ⑤ Video in: Press [Video in ▲] switch between different input video sources (HDMI 1, HDMI 2, HDMI 3).
- ⑥ Audio in: Press [Audio in ▼] switch between different input audio sources (Optical 1, Optical 2, Coaxial 1, Coaxial 2, L/R 1, L/R 2, L/R 3, L/R 4, HDMI\_2ch or HDMI\_Mch). By choosing HDMI\_2ch & HDMI\_Mch the output source will depend on HDMI input 1~3 single input's original signal only. Please refer to “section 10 LCM Operation”.
- ⑦ Volume -/+ : Press [-] / [+] to adjust the volume up/down.
- ⑧ LCM display.

## 8. Remote Control

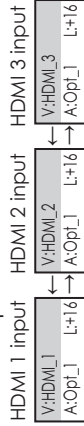
1. Power: Press to turn ON/OFF the system. When power on the LED will indicate in Green color, when power off the LED will indicate in Red color.
2. Mute: Press to mute the audio, press again to turn ON the audio.
3. HDMI in: Select the desire HDMI input source from 1~3.
4. Audio in: Select the desire audio input source (OPT1, OPT2, COAX1, COAX2).
5. Analog audio in: Select the desire stereo analog input source from 1~4.
6. HDMI LPCM: <MULTI CH> for 5.1 CH output. <2CH> for 2CH L/R output.
7. -/+ : Press [-] / [+] to adjust the volume, Press [-]: to decrease the volume, minimum level to +0  
Press [+]: to increase the volume, maximum level to +64
8. Menu/▲/▼/←/→ :  
Press to enter the LCM menu and sub-menu.  
From sub-menu press [▲/▼/←/→] to adjust Bass /Treble /Loudness /LipSync LR, C and default setting.



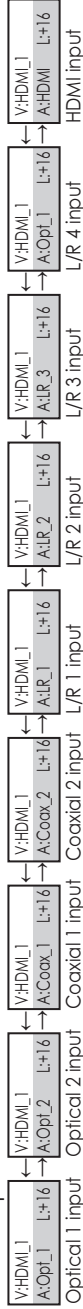
# 9. LCM Operation

## 9.1 LCM Menu

### 1. Video input selection



### 2. Audio input selection



### 3. Volume Adjustment



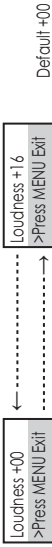
### 4. Bass Adjustment



### 5. Treble Adjustment



### 6. Loudness Adjustment



### 7. LipSync LR



### 8. LipSync Center



### 9. Factory setting

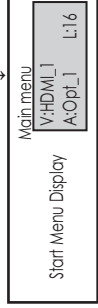


Factory Setting - Off Factory Setting - On

↓ ( Manual )



Wait... ↓



Operation instruction:

↑↓ : Press ↓↑to move the cursor.

←→ : Press ←→to move the cursor or adjust the value.

MENU : Switch between Main Manual or Sub-Manual or Confirm the selection.

## 9.2 LCM Menu 1

0 1 2 3 4 5 6 7 8 9 A B C D E F  
 V : H D M I \_ 1  
 A : O p t \_ 1 L : +1 6

Main MenuVideo In

V : H D M I \_ 1  
 A : O p t \_ 1 L : +1 6

Audio In

V : H D M I \_ 1  
 A : O p t \_ 1 L : +1 6

Volume

0 1 2 3 4 5 6 7 8 9 A B C D E F  
 B a s s -1 2  
 > P r e s s M E N U E x i t

Sub Menu Bass

0 1 2 3 4 5 6 7 8 9 A B C D E F  
 B a s s +1 2  
 > P r e s s M E N U E x i t

T r e b l e -1 2  
 > P r e s s M E N U E x i t

Treble

T r e b l e +1 2  
 > P r e s s M E N U E x i t

L o u d n e s s +0 0  
 > P r e s s M E N U E x i t

Loudness

L o u d n e s s +1 6  
 > P r e s s M E N U E x i t

L i p S y n c L R +0 0  
 > P r e s s M E N U E x i t

LipSync LR

L i p S y n c L R +1 6  
 > P r e s s M E N U E x i t

L i p S y n c C +0 0  
 > P r e s s M E N U E x i t

LipSync C

L i p S y n c C +1 6  
 > P r e s s M E N U E x i t

D e f a u l t O f f  
 > P r e s s M E N U E x i t

Default

D e f a u l t O n  
 > P r e s s M E N U E x i t

L o a d D e f a u l t  
 W a i t . . .

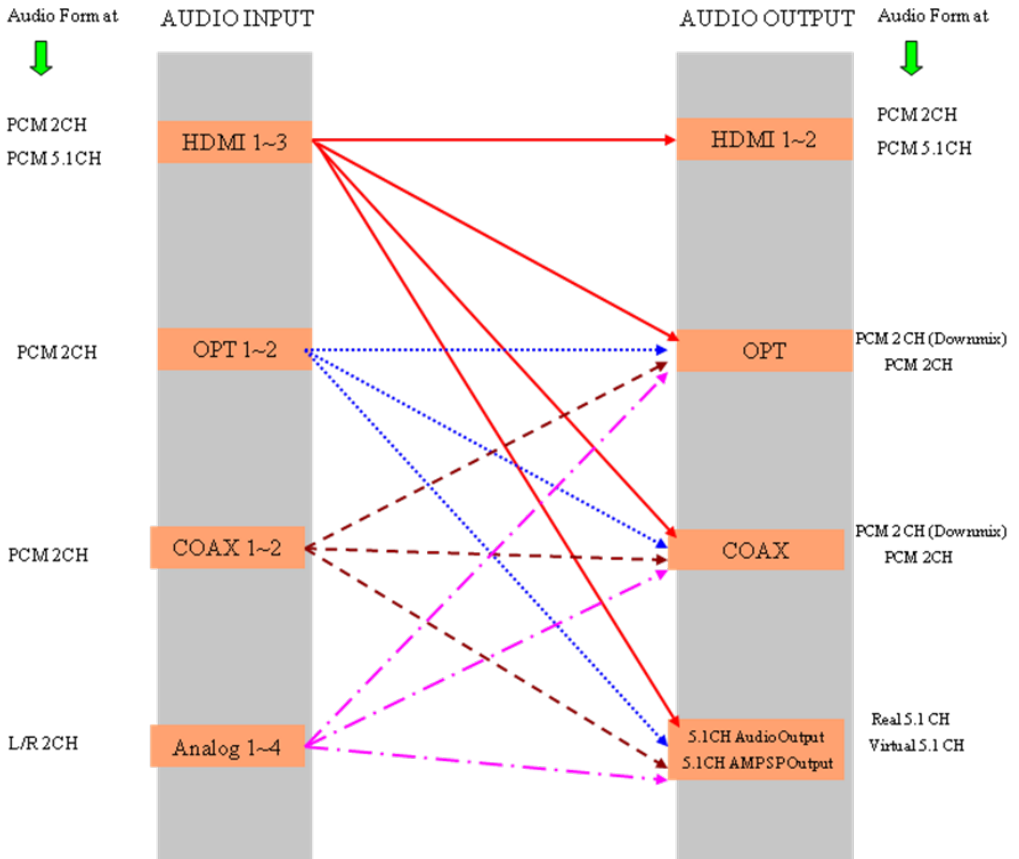
Wait

### 9.3 LCM Operation table

Function	Level	Suggestion level
Bass	-6 ~ +6	0
Treble	-6 ~ +6	0
Loudness	-6 ~ +6	0
LipSync LR	0 ~ 16	0
LipSync C	0 ~ 16	0
Default	Off/On	off

- LipSync can delay 120ms +/- 5% for each mono channel.

## 10. Audio input & output diagram



## 11. Audio output format table

			Output Jacker & Format				
			HDMI_1 Out	HDMI_2 Out	OPT Out	COAX Out	6 RCA Line Out
Input Jacker & Format	PCM 5.1 CH	HDMI_1 In	PCM 5.1 CH	PCM 5.1 CH	PCM 2 CH (Downmix)	PCM 2 CH (Downmix)	Real 5.1 CH
		HDMI_2 In	PCM 5.1 CH	PCM 5.1 CH	PCM 2 CH (Downmix)	PCM 2 CH (Downmix)	Real 5.1 CH
		HDMI_3 In	PCM 5.1 CH	PCM 5.1 CH	PCM 2 CH (Downmix)	PCM 2 CH (Downmix)	Real 5.1 CH
	PCM 2 CH	HDMI_1 In	PCM 2 CH	PCM 2 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		HDMI_2 In	PCM 2 CH	PCM 2 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		HDMI_3 In	PCM 2 CH	PCM 2 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH

Input Jacker & Format	PCM 2 CH	OPT_1 In	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		OPT_2 In	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		COAX_1 In	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		COAX_2	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
	Line 2 CH	RCA Line_1 In	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		RCA Line_2 In	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		RCA Line_3 In	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH
		RCA Line_4 In	PCM 2 CH / 5.1 CH (Audio from HDMI In)	PCM 2 CH / 5.1 CH	PCM 2 CH	PCM 2 CH	Virtual 5.1 CH

Note: 1. 6 ports of RCA output only support 5.1 Channels.

2. This system can't support compress audio input (AC3 or DTS), if the audio sources are contain compress audio the output from Optical, Coaxial, 6 RCA and 5.1 CH amplifier are soundless, this is normal phenomena.

## 11. Specifications

Video Input Ports	3 x HDMI
Digital Audio Input Ports	2 x Coaxial, 2 x Optical
Analog Audio Input Ports	4 x Audio R/L
Video Output Ports	2 x HDMI
HDMI Format	V1.2
Support Resolution	480i/1080i, 1080p 50/60, 1080p 24, VGA/UXGA
HDMI Audio Format	PCM2, PCM5.1, Dolby 5.1 (PS3 Setting)
HDMI Cable in/out	15/15M
Digital Audio Output ports	1 x Coaxial, 1 x Optical
Analog Audio Output ports	5.1 channels output clips (8ohm trumpets, the output power is around 15Wx6/90W )
Coaxial Audio Format	PCM2
Coaxial Audio Sampling	32, 44.1 and 48KHz
SPIDIF Audio Format	PCM2
SPIDIF Audio Sampling	32, 44.1 and 48KHz
Amplifier Output Format	5.1CH AMP output: PCM2, PCM5.1 5.1CH output: PCM2, PCM5.1
IR Distance	Horizontally free space 7M , 30 degree left/right free space 3M
Power Supply	18V/3.33A DC (US/EU standards, CE/FCC/ULcertified)
Dimensions (mm)	171 (W) x 356(D) x 70(H)
Weight(g)	1764
Chassis Material	Aluminum
Silk Skin Color	Silver
Operating Temperature	Operating from 0°C ~ 40°C
Power Consumption	60W (Max)





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